

1. Please read the excerpt and answer the questions.
 - (1) Please state the proposed hypothesis and the supporting evidence provided by the author. (10%)
 - (2) The author provided arguments for potential opposing opinions. Please identify those opposing views and state how the author counteracted? (15%)

We Come Down From the Trees for Booze

The story of humanity's love affair with alcohol goes back to a time before farming—to a time before humans, in fact. Our taste for tippie may be a hardwired evolutionary trait that distinguishes us from most other animals.

The active ingredient common to all alcoholic beverages is made by yeasts: microscopic, single-celled organisms that eat sugar and excrete carbon dioxide and ethanol, the only potable alcohol. That's a form of fermentation. Most modern makers of beer, wine, or sake use cultivated varieties of a single yeast genus called *Saccharomyces* (the most common is *S. cerevisiae*, from the Latin word for "beer," *cerevisia*). But yeasts are diverse and ubiquitous, and they've likely been fermenting ripe wild fruit for about 120 million years, ever since the first fruits appeared on Earth.

From our modern point of view, ethanol has one very compelling property: It makes us feel good. Ethanol helps release serotonin, dopamine, and endorphins in the brain, chemicals that make us happy and less anxious.

To our fruit-eating primate ancestors swinging through the trees, however, the ethanol in rotting fruit would have had three other appealing characteristics. First, it has a strong, distinctive smell that makes the fruit easy to locate. Second, it's easier to digest, allowing animals to get more of a commodity that was precious back then: calories. Third, its antiseptic qualities repel microbes that might sicken a primate. Millions of years ago one of them developed a taste for fruit that had fallen from the tree. "Our ape ancestors started eating fermented fruits on the forest floor, and that made all the difference," says Nathaniel Dominy, a biological anthropologist at Dartmouth College. "We're preadapted for consuming alcohol."

Robert Dudley, the University of California, Berkeley physiologist who first suggested the idea, calls it the "drunken monkey" hypothesis. The primates that ventured down out of the trees got access to a brand-new food source. "If you can smell the alcohol and get to the fruit faster, you have an advantage," Dudley says. "You defeat the competition and get more calories." The ones that stuffed themselves were the most likely to succeed at reproduction—and to experience (while eating) a gentle rush of pleasure in the brain. That buzz reinforced the appeal of the new lifestyle.

A truly drunken monkey, Dudley points out, would be an easy target for predators. In spite of widely reported anecdotes, there's very little scientific evidence of animals in the wild ever getting enough alcohol from fermented fruit to exhibit drunken behavior. A satisfied glow is more likely. But that response to alcohol seems to be specific to humans and perhaps apes.

The reason may be a critical gene mutation that occurred in the last common ancestor of African apes and us; geneticists recently dated the mutation to at least 10 million years ago. This change in the ADH4 gene created an enzyme that made it possible to digest ethanol up to 40 times faster. According to Steven Benner, a co-author of the study and a biologist at the Foundation for Applied Molecular Evolution in Alachua, Florida, the new improved enzyme enabled our ancestors to enjoy more of the overripe bounty on the forest floor, without suffering ill effects.

"You could say we came out of the trees to get a beer," Benner says. But the point wasn't to get drunk. That would come much later, once we figured out how to make the stuff in quantity.

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2. Please read the article and answer the questions.
- (1) Please write a 100-word summary of the article. (10%)
- (2) The author provided contrasting traits of sloths. What are they? (15%)

Sloth

It's a good thing sloths don't have to go to school. They'd never make it on time. These drowsy tree-dwellers sleep up to 20 hours a day! And even when they are awake, they barely move at all. In fact, they're so incredibly sluggish, algae actually grows on their fur.

Sloths live in the tropical forests of Central and South America. With their long arms and shaggy fur, they resemble monkeys, but they are actually related to armadillos and anteaters. They can be 2 to 2.5 feet (0.6 to 0.8 meters) long and, depending on species, weigh from 8 to 17 pounds (3.6 to 7.7 kilograms).

There are two main species of sloth, identified by whether they have two or three claws on their front feet. The two species are quite similar in appearance, with roundish heads, sad-looking eyes, tiny ears, and stubby tails. Two-toed sloths are slightly bigger and tend to spend more time hanging upside-down than their three-toed cousins, who will often sit upright in the fork of a tree branch. Three-toed sloths have facial coloring that makes them look like they're always smiling. They also have two extra neck vertebrae that allow them to turn their heads almost all the way around!

Some scientists think sloths developed their slow-motion lifestyle so they would be less noticeable to predators such as hawks and cats, which rely heavily on their eyesight when hunting. The algae that grows on sloths' fur also helps them avoid predators by letting them blend in with green leaves. They rarely come down from the trees. About once every week, they descend to go to the bathroom, slowly moving about by digging their front claws into the dirt and dragging their bodies. If they are caught by a predator, sloths turn from sluggish to slugger, biting fiercely, hissing, slashing with their claws, and shrieking.

3. Given the idea from the following passages under the title "This ain't no joke...", please discuss how syntax should be viewed by a linguist.
- (1) Please state the author's view on prescriptive vs. descriptive rules as expressed in the passages. (5%)
- (2) Please express your view on logic and language and its relationship, with reference to whether a sentence is acceptable or grammatical. Give examples to support or refute the author's idea. (15%)

This ain't no joke....

The prescriptive rule about not using double negatives, was created by Bishop Robert Lowth in 1762 in England. The idea was to make English more like formal mathematical logic, and thus improve the thinking of English speakers. But this was not a *descriptive rule* of English; English has always used double negatives, as this sentence from the *Anglo-Saxon Chronicles* (written in the time of Alfred the Great) illustrates:

Ne bith thær nænig ælo gebrowen mid Estum.
not be there not-any beer brewed among Estonians
'There is no beer brewed among the Estonians.'

Furthermore, in some languages, like Spanish and Russian, so-called "double negatives" are the rule, rather than the exception. Note the Spanish and Russian expressions for *I don't see anything*.

Spanish: *Yo no veo nada.*

I no see nothing

Russian: *Ya ne vizhu niche vo.*

These are the normal, indeed the only, way of expressing this in Spanish and Russian. If language worked like formal logic, Spanish and Russian speakers would be suffering from a permanent case of illogic. Since speakers of Spanish and Russian appear to be normal human beings, we have to conclude that language does not obey the rules of formal logic.

Thus, the rule against double negatives formulated by Bishop Lowth is not a *grammar* rule, but rather a *social* rule having to do with what he considered to be the acceptable use of English.

Taken from https://www.unf.edu/~rkephart/Writings/Essay_on_Language.htm

4. Many definitions of language have been proposed. Henry Sweet, an English phonetician and language scholar, stated: "Language is the expression of ideas by means of speech-sounds combined into words. Words are combined into sentences, this combination answering to that of ideas into thoughts." The American linguists Bernard Bloch and George L. Trager formulated the following definition: "A language is a system of arbitrary vocal symbols by means of which a social group cooperates." Any succinct definition of language makes a number of presuppositions and begs a number of questions.
- (1) What element is emphasized in the two definitions given respectively by Sweet and by Bloch & Trager? (10%)
- (2) Language interacts with every aspect of human life in society, and it can be understood only if it is considered in relation to society. Based on the considerations (A-E) given below, pick any **TWO** and explain why they should be taken into account as proper understanding of language as a subject. Elaborate your ideas into a well-structured and well-organized essay of around 200 words to support your arguments based on linguistic phenomena falling under each consideration of your choice. (20%)

In spite of the many different definitions of language, five considerations below are often pointed out regarding a proper understanding of language as a subject:

- A. *Every physiologically and mentally typical person acquires in childhood the ability to make use, as both sender and receiver, of a system of communication that comprises a circumscribed set of symbols (e.g., sounds, gestures, or written or typed characters).*
- B. *Different systems of communication constitute different languages; the degree of difference needed to establish a different language cannot be stated exactly.*
- C. *Typically, people acquire a single language initially—their first language, or native tongue, the language used by those with whom, or by whom, they are brought up from infancy.*
- D. *Language is species-specific to human beings.*
- E. *In most accounts, the primary purpose of language is to facilitate communication, in the sense of transmission of information from one person to another.*

adapted from <https://www.britannica.com/topic/language>